Toward Cobalt-free SOC stacks: comparative study of $(Mn,Cu,Fe)_3O_4$ vs. $(Mn,Co)_2O_4$ spinels as protective coatings for the SOFC interconnects

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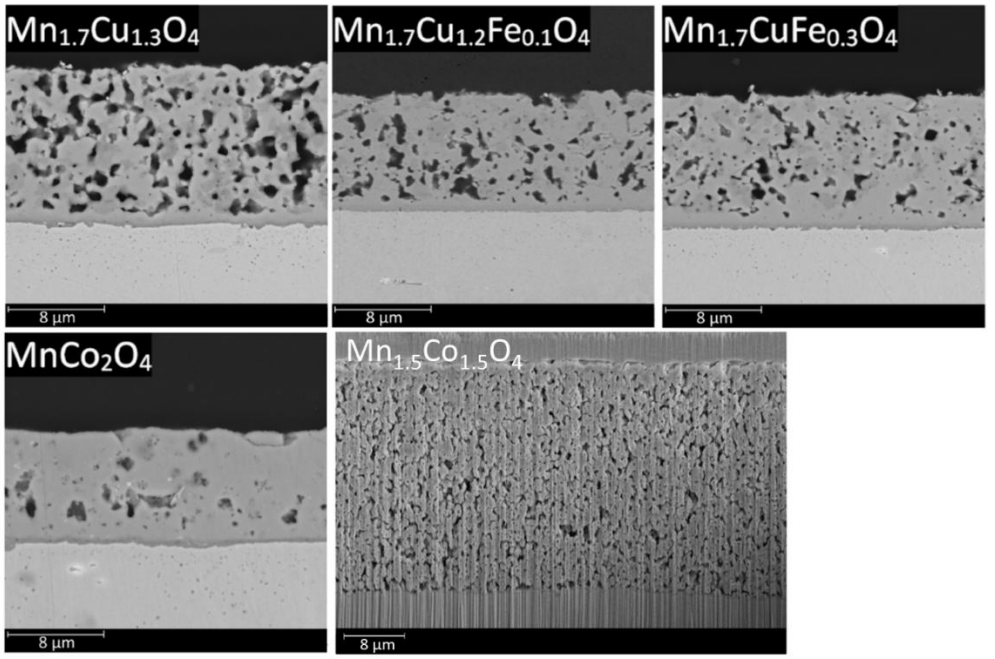


Figure S1. SEM images of the cross-section of the sintered coatings deposited by EPD on steel flat coupon samples. Sample with $Mn_{1.5}Co_{1.5}O_4$ was prepared using ion polishing to avoid delamination.

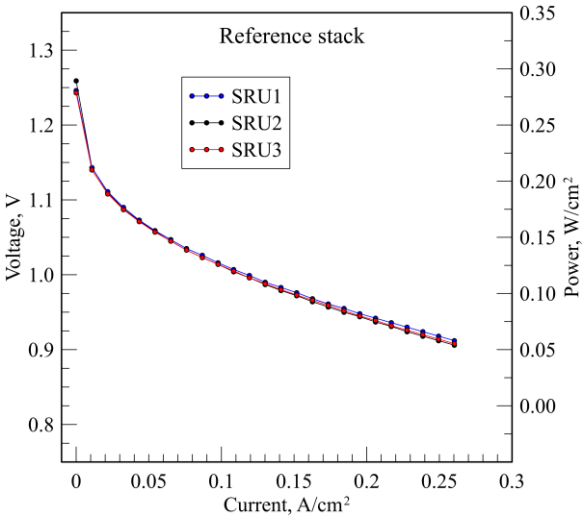
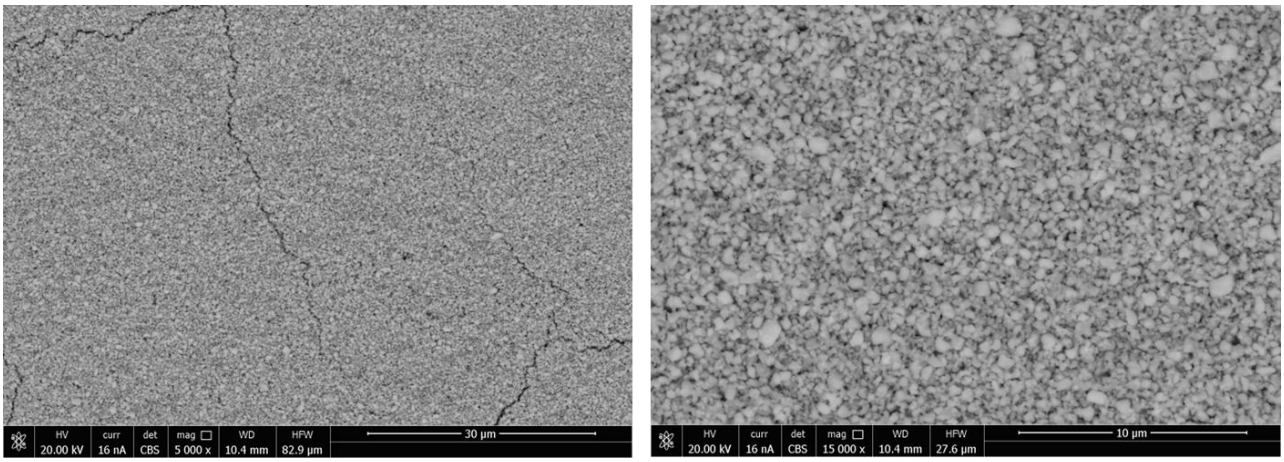


Figure S2. Current-voltage characteristics of the reference stack. Temperature: 680-685 °C, fuel flow: 50% H_2 in N_2, 2.0 L_N/min total; air flow 3.6 L_N/min. Interconnect protection: MC11



(**a**) (**b**)

Figure S3. SEM images of surface of oxygen electrode made of LSC that were not in direct contact with the tops of the ribs of the interconnects, (a) magnification x5000, (b) magnification x15000 – basis for EDS area analysis

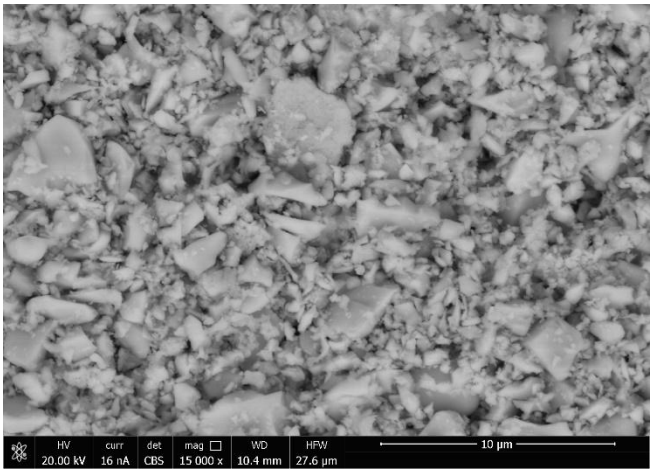


Figure S4. SEM images of residue of contact layer made of LSCF on surface of oxygen electrode – basis for EDS area analysis

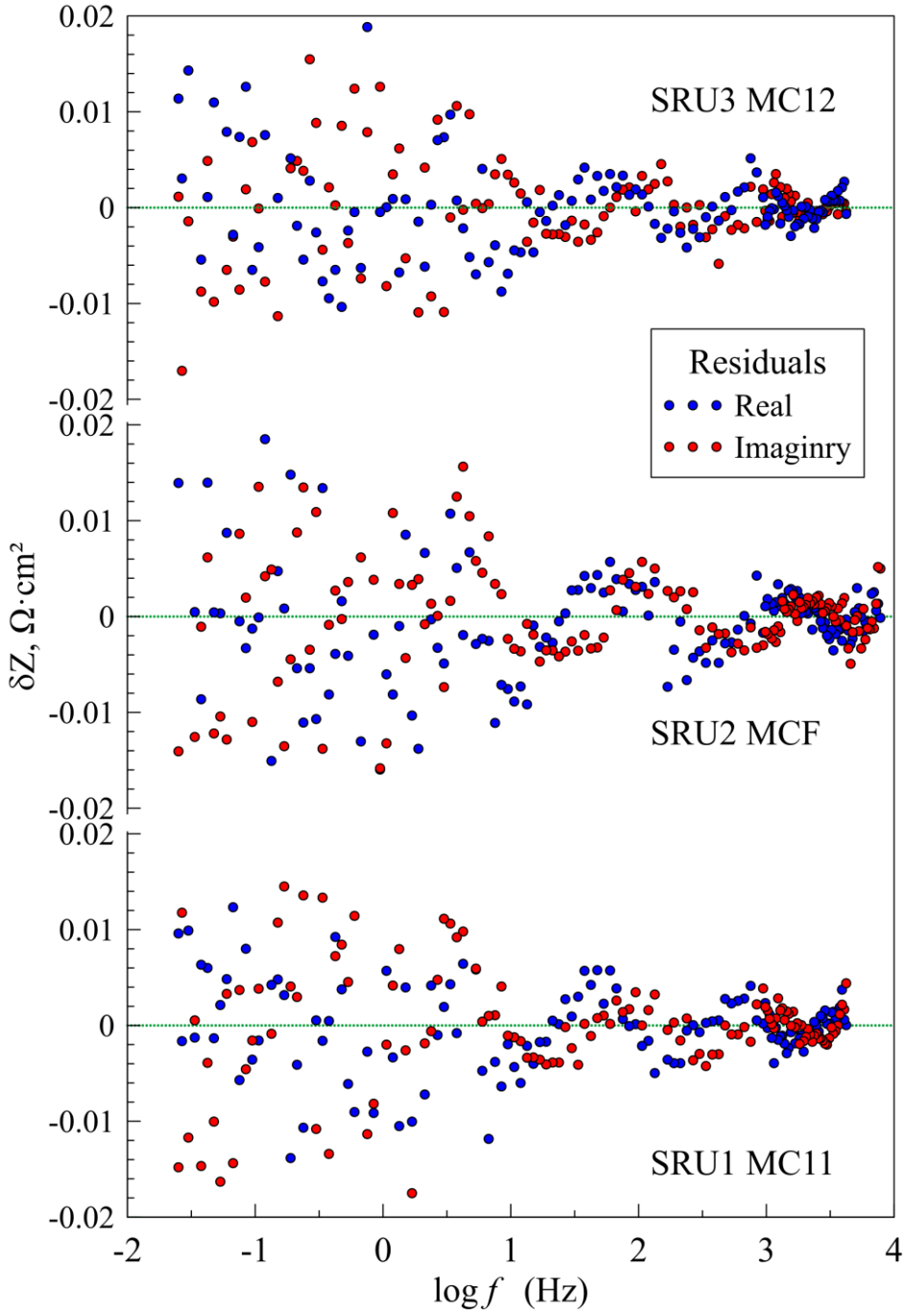


Figure S5. Residuals of the fits, presented of Figure 4a.